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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------------|------------------------|
| 10/528,631 | 11/16/2005 | Ruihua Chen | 60289-USA | 7138 |
| 7590 John M Sheehan FMC Corporation 1735 Market Street Philadelphia, PA 19103 | | | EXAMINER MONSHIPOURI, MARYAM | |
| | | | ART UNIT 1656 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,631

Applicant(s)

CHEN ET AL.

Examiner

Maryam Monshipouri

Art Unit

1656

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 5, 6 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Claims 8-12 have been canceled. Claims 1-7 and 13 are still at issue and are present for examination.

Applicants' arguments filed on 12/21/07, have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

On 2/6/2008 the examiner called applicant (Mr. Sheehan) to negotiate allowance but was informed that the inventors are no longer in pursuit of obtaining a patent for this application and they intend not to respond to the instant office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 4 and 7 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for isolated nucleic acid molecules encoding SEQ ID NO:2, does not reasonably provide enablement for any mutants, parts of fragments of DNA sequences encoding SEQ ID NO:2 wherein said parts, mutants and fragments having no function according to previous office action. In traversal of this rejection applicant argues the following **(1)** that claims 1 and 2 as amended require that isolated nucleic acids have at least 80% identity to the sequence encoding SEQ ID NO:2 and require functionality of the claimed subject matter namely, hemipteran myosin light chain kinase activity. Also, according to applicant, claim 4 has been amended to

require at least 100 nucleotides of the DNA sequence encoding 80% homologs of SEQ ID NO:1, in an attempt to render the claim enabled.

(2) the techniques needed to practice the invention were well known to those skill in the art for many years at the time of the invention. The specification fully discloses methods to identify, derive or isolate natural or synthetic mutants of SEQ ID NO:1. The specification also describes or provides guidance to those skilled in the art how to assess proteins encoded by the claimed DNA sequences, that have biological activity as a hemipteran myosin light chain kinase. Further, it is inappropriate to reject under lack of enablement where the amount of experimentation to practice the full scope of an invention would have been routine, even if extensive, as is the case here.

Therefore, the rejection should be withdrawn.

These arguments were fully considered but were found unpersuasive. With respect to applicant's **first** argument it is noted that applicant has amended claims 1, 2 and 4 to recite some more structural information for mutants. parts or fragments of DNA encoding SEQ ID NO:2. However, said amendment does not put said claims in condition for allowance because claimed mutants, parts and fragments fail to have any function associated with them. The examiner is unclear as what applicant means when he/she indicates that instant mutants parts and fragments require the myosin light chain kinase activity. Applicant is respectfully requested to review instantly filed claims 1-2 wherein for part (b) of each claim no function is recited. Therefore, it is highly likely that DNA sequences of part (b) of each claim encode products that have entirely different function than hemipteran myosin light chain kinase.

In response to applicant's **second** argument, the examiner respectfully disagrees with applicant that the specification provides guidance as how to assess the activity of the expression product of claimed DNA sequences and thereby identify said DNA sequences, as broadly claimed. As mentioned above instant claims 1-2, part b, do not require any function for the claimed mutants, fragments and parts and such products with such low structural similarity (only 80% identity or higher) to DNA encoding SEQ ID NO:2 can encode products with many different functions than that of light chain of myosin kinase for which absolutely no screening guidance is provided. Instant disclosure only provides screening guidance for DNA sequences encoding SEQ ID NO:2. Therefore, as mentioned previously, based on the teachings of the specification one of skill in the art has to go through the burden of undue experimentation to search among millions and millions of SEQ ID NO:1 fragments, parts and mutants for those DNA sequences that have support in the specification. As applicant can appreciate, searching for claimed fragments, parts and mutants of no specific function not only is not routine but is both extensive and undue. With regards to claim 4, the phrase "at least" renders said claim subject to scope of enablement rejection because the claimed nucleic acids can retain any number of nucleotides between 100-2517 and no specific activity is required for such DNA sequences, rendering the scope of said claim enormous.

Since the DNA sequences of claim 1 are not fully enabled vectors comprising them are not fully enabled either (see claim 7).

In conclusion, in view of the arguments provided above, in addition to those provided in the past office actions the rejection is maintained.

Claims 1-2, 4 and 7 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention according to previous office action. In traversal of this rejection applicant basically relies on the same traversal argument s provided for lack of enablement rejection (see above), which have already been addressed.

Claims 3, 5, 6 and 13 are allowed for the reasons of record.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maryam Monshipouri whose telephone number is (571) 272-0932. The examiner can normally be reached on Tues.-Fri., from 7:00 a.m to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleene Kerr Bragdon can be reached on (571) 272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Maryam Monshipouri/

Primary Examiner, Art Unit 1656

